Serial No. 09/698,395

In the Claims:

(Currently Amended) An simulated steering feel system comprising:
 an input device positioned within an automobile;

a servo disk motor in communication with said input device;

a vehicle dynamics element; and

a steering feel control processor in communication with said servo disk motor and said vehicle dynamics element, said a steering feel control processor generating a feedback torque based on information from said vehicle dynamics element, said servo disk motor eapable of-imparting said feedback torque onto to an said input device;

wherein said input device is part of a steer by wire system, said input device having no mechanical steering connection.

- 2. (cancelled) A simulated steering feel system as described in claim 1 further comprising a steering feel control processor.
- 3. (Currently Amended) A simulated steering feel system as described in claim 1 further comprising—wherein said vehicle dynamics element comprises at least one vehicle dynamic sensor.
- 4. (Currently Amended) A simulated steering feel system as described in claim 1 further comprising:
- a torque multiplier <u>positioned between said input device and said servo disk</u> motor, said torque multiplier <u>utilized to magnifying said feedback</u> torque generated by said servo disk motor <u>before imparting onto said input device</u>.
- 5. (Original) A simulated steering feel system as described in claim 4 wherein said torque multiplier is a gear reducer.

(V199-1489) VGT 0143 PA

Serial No. 09/698,395

3

- 6. (Original) A simulated steering feel system as described in claim 1 wherein said input device is a steering wheel.
- 7. (Currently Amended) A simulated steering feel system as described in claim 1 further comprising:
- a steering wheel sensor element <u>in communication with said input device</u>, <u>said</u> steering wheel sensor element communicating movement of said input device to said steering feel control processor.
- 8. (cancelled) A simulated steering feel system as described in claim 1 for use in a driving simulator.
- 9. (Cancelled) A simulated steering feel system as described in claim 1 for use in an entertainment device.
 - 10. (Cancelled).
- 11. (Currently Amended) A simulated steering feel system as described in claim 1 further comprising:

a motor driver element <u>positioned between said steering feel control processor</u> and said servo disk motor, said motor driver element utilized to operate said servo disk motor.

12. (Currently Amended) A simulated steering feel system comprising:

a steering wheel positioned within an automobile, said steering wheel part of a steer by wire system, said steering wheel having no mechanical steering connection;

a servo disk motor in communication with said steering wheel; and a vehicle dynamics element; and

a steering feel control processor in communication with said servo disk motor and said vehicle dynamics element, said a steering feel control processor generating a feedback

torque based on information from said vehicle dynamics element, said servo disk motor imparting said feedback torque onto said steering wheel;

a torque multiplier <u>p ositioned b etween s aid s teering w heel a nd s aid s ervo d isk</u> motor, said torque multiplier <u>used in conjunction with to relay said feedback torque from said servo disk motor to said steering wheel to impart road feel to a steering wheel;</u>

wherein said steering wheel is part of a steer by wire system, said steering wheel having no mechanical steering connection.

- 13. (Original) A simulated steering feel system as described in claim 12 wherein said torque multiplier is a gear reducer.
- 14. (cancelled) A simulated steering feel system as described in claim 12 further comprising:

a steering feel control processor.

- 15. (Currently Amended) A simulated steering feel system as described in claim 12 further comprising—wherein said vehicle dynamics element comprises at least one vehicle dynamic sensor.
- 16. (Currently Amended) A simulated steering feel system as described in claim 12 further comprising:

a steering wheel sensor element <u>in communication with said steering wheel, said steering wheel sensor element communicating movement of said steering wheel to said steering feel control processor.</u>

17. (Currently Amended) A simulated steering feel system as described in claim 12 further comprising:

a motor driver element <u>positioned in between said steering feel control processor</u> and said servo disk motor, said motor driver element utilized to operate said servo disk motor.

- 18. (cancelled) A simulated steering feel system as described in claim 12 for use in a driving simulator.
- 19. (cancelled) A simulated steering feel system as described in claim 12 for use in an entertainment device.
 - 20. (Cancelled).
- 21. (Currently Amended) A method of creating simulated steering feel comprising:

monitoring vehicle dynamic sensors positioned within an automobile;

utilizing a steering feel control processor to develop a feedback torque based on said vehicle dynamic sensors;

communicating said feedback torque from said steering feel control processor to a servo disk motor;

determining an appropriate feedback torque; and

transmitting said feedback torque towards the onto a steering wheel using a said servo disk motor.

22. (cancelled) A method of creating simulated steering feel as described in claim 21 wherein determining appropriate feedback torque comprises the steps of measuring vehicle dynamics characteristics; and

imputing an appropriate feedback torque using said vehicle dynamic characteristics.

23. (Currently Amended) A method of simulating steering feel as described in claim 21 further comprising the step of increasing the output of said servo disk motor using a gear reducer, said gear reducer positioned between said servo disk motor and said steering wheel.